

STROPHIDIA CLARISSIMA, n. sp.

Allied to *S. pannata* of Felder (Reise der Nov., Lep. iv. pl. cxxviii. fig. 39). Snow-white, with black fringe; primaries with a broad subcostal stripe, and the outer border smoky brown, costal area from the margin to the edge of the stripe mottled with black; secondaries with a rather broad and regular blackish submarginal band from the apex to the second median branch, two large rounded black spots touching the outer margin on the median interspaces, a subanal transverse black dash; back of head and upper margin of palpi black; antennæ greyish brown: wings below white; fore wings with the costal margin, a subcostal spot just beyond the cell, the apex, and the external border greyish brown; hind wings with a broad triangular patch of blackish between the anal angle and the third median branch, continued beyond this branch as a submarginal greyish brown band, which runs in a straight line to the apex. Expanse of wings 2 inches 3 lines.

One example of this beautiful species.

6. On the Systematic Position of the Genus *Lathamus* of Lesson. By W. A. FORBES, F.Z.S.

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(Plate XVI.).

In their paper on Australian birds in the Linnean Society's Transactions for 1828 (vol. xv. p. 74), Messrs. Vigers and Horsfield established a genus *Nanodes*, of which the *Psittacus discolor* of Shaw¹ was made the type, and full generic characters were given. Besides *Nanodes discolor*, three other species (those now generally known as *Melopsittacus undulatus*, *Euphema pulchella* and *Platycercus venustus*) were included in the genus, which was considered by its authors to be allied to *Pezoporus* and *Platycercus*, and as connecting these Australian forms with the South-American *Psittacaræ* (= *Conurus* auct.). *Nanodes* having been already used by Schönherr for a genus of Rhynchophorous Coleoptera², Lesson³ substituted for this name that of *Lathamus*, including under that head four other species (one a *Euphema*, one a *Cyanorhamphus*, and two *Trichoglossi*, as now understood), remarking that Swainson "a parfaitement établi ses caractères" in his 'Zoological Illustrations,'⁴ where, however, *E. pulchella* is considered the type of the genus⁵. As will be seen from

¹ White's Voyage, pl. 263 (1790). For the synonymy of the species, see Finsch, Papag. ii. p. 863.

² Schönh. Curcul. Disp. Meth. p. 322 (1826).

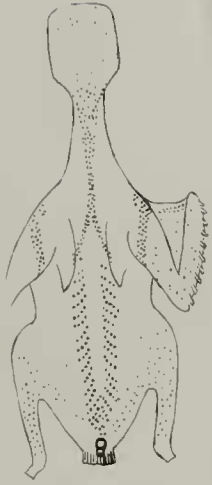
³ Traité d'Orn. p. 205 (1831).

⁴ 2nd series, vol. i. part 5, no. 21 (1829).

⁵ Swainson, however, in his 'Classification of Birds' (vol. ii. p. 304, 1837), makes *Lathamus* a member of his "subfamily Platycercinæ," in which he also includes *Coraeopsis*, *Pezoporus*, *Platycercus*, and *Calopsitta*, with the remark that it is a "subtypical" form.



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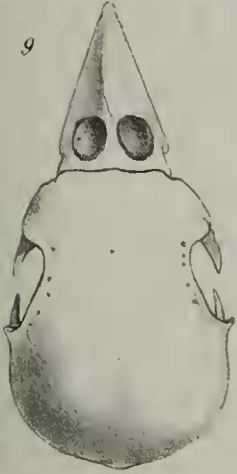
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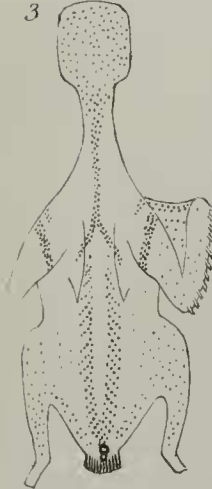
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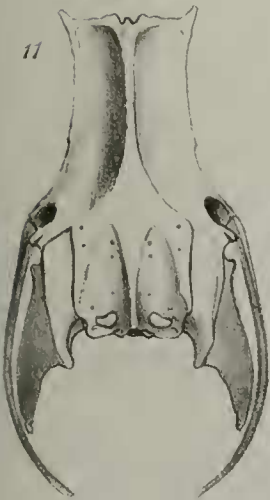
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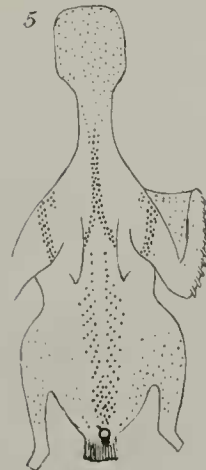
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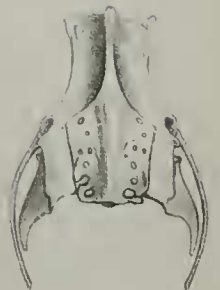
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the species associated with it, all these authors were evidently puzzled by the characters of this peculiar little Parrakeet; and the same seems to have been the case with all subsequent naturalists who have treated of it. The majority, however, seem to have considered that it had *Trichoglossine* affinities.

Thus Bonaparte¹ included *Lathamus* as “dernier des *Trichoglossiens* ;” and Gould, likewise acknowledging the validity of the genus, places it amongst the *Trichoglossidæ*. He says :—“ Having had ample opportunities of observing the bird in a state of nature, I concur in the propriety of separating it into a distinct genus; in its whole economy it is most closely allied to the *Trichoglossi*, and in no degree related to the *Euphemæ*” (Handb. B. Austr. ii. p. 89). Dr. Finsch, in his great work on Parrots², after a careful examination of its peculiarities, came to the conclusion that these were not sufficient to justify its separation as a distinct genus, and included it as a *Trichoglossus*. More lately, the same position (*i. e.* that of a member of the family *Trichoglossidæ*) has been assigned to it by Gray³, Sclater⁴, Wallace⁵, and others. On the other hand, Sundevall in his ‘Tentamen’⁶ placed it in his fourth family “*Platycercini*,” remarking, “Hæc species, plerumque cum sp. *Trichoglossinis* (*Ps. concinno* &c.) consociata, vera tamen est species *Platycercina*, maxillâ inferiori tumidâ, &c, *Euphemæ* maxime affinis.” In his paper on the anatomy of the Parrots, Prof. Garrod⁷ shows that *Lathamus* differs from *Lorius* and its allies in having a superficial left carotid, a feature common to it and *Platycercus*, *Psephotus*, &c., from which, however, it differs in the possession of a furcula⁸. He further says :—“ It may at first sight seem very heretical to remove *Lathamus* from the *Loriinæ*, the brush-tongue being considered characteristic of that subfamily. To the unbiased student, however, the brush-tongue is a character not more important than several of those that have been above considered. . . . The character of the papillæ is somewhat different in *Lathamus* from what it is in *Lorius*, they being blunter and shorter in the former genus than in the latter.”

Having undertaken at Prof. Garrod’s suggestion an investigation of the pterylosis of the Parrots, the results of which I hope to communicate to this Society at no distant date, *Lathamus* was one of the first forms I examined; and I at once saw that its pterylosis confirmed the relationship of this form to the *Platycercinæ* already insisted on by Sundevall and Garrod. From this I was led to an examination of some other parts of its structure; and I propose to lay the

¹ Compt. Rend. xlv. p. 536 (1857).

² Pap. ii. p. 863 (1868).

³ *Trichoglossus*, c. *Nanodes*, gen. no. 2047, Hand-l. B. ii. p. 156 (1870).

⁴ List. Vert. 6th ed. p. 269 (1877).

⁵ Geogr. Distrib. Animals, ii. p. 327.

⁶ *Methodi Naturalis Avium disponendarum Tentamen*, p. 71 (1872).

⁷ P. Z. S. 1874, p. 586.

⁸ M. Blanchard, indeed, says (Compt. Rend. 1857, xlv. p. 521) that *Lathamus* has no furcula; but this bone is present, though small and weak, in the mens I have seen: cf. also Owen, Cat. Ost. Ser. R. O. S. i. p. 279 (1853).

results of my inquiries before the Society to-night, in order to establish the view that *Lathamus* must be removed from the brush-tongued *Trichoglossinæ*, with which it has been so generally associated, and must be considered a (no doubt aberrant) member of the Platycercine group.

The pterylosis of this form having first struck my attention, I will describe this in the first instance, the more so as, as far as I know, no description of this part of the structure of the bird in question has yet been published. I may perhaps anticipate part of my paper on the pterylosis of the Psittaci in general, and point out briefly the general characters of the distribution of the feathering in these birds, so as to enable the reader without any further trouble to appreciate the points of distinction in this respect between *Lathamus* and the other species with which I have compared it.

As will be evident from the figures (Pl. XVI. figs. 1-6), the tracts of contour-feathers in a Parrot may be arranged as follows:—On the upper surface of the body, continuous in front with the feathering of the top and sides of the head, is a long narrow tract, the “superior tract,” which divides behind in the interscapular region in a fork-like manner, forming the “scapular fork.” Behind this, occupying the hinder part of the back and pelvis, is another, more or less Y-shaped tract, with the “handle” (which is usually short) of the fork placed close to the posterior extremity of the trunk, whilst the more lengthy “arms” of the Y are more anterior, and run in, in front, between the corresponding ones of the “scapular fork,” usually becoming very feebly feathered in so doing. This tract may be called the “dorso-lumbar” fork. Scattered more irregularly and diffusely over the sides of the pelvis, and external to the last-named tract, is the “lumbar feathering,” which passes posteriorly on each side into the narrower but more distinct “femoral tracts.” These are continued onto the legs as far as the tarsi as the “crural tracts,” clothing the legs in a trouser-like way. On the inferior surface, on each side, is a continuous tract, running from the upper part of the neck (where it may or may not unite with its fellow of the opposite side), over the breast and abdomen, to the anus. This “inferior tract,” besides one or two small branches running towards the humerus and patagium (the first and second “humeral tracts”), gives off, at about the commencement of the sternum, a more or less separate and well-marked external branch, the “outer pectoral” tract, which runs down more or less parallel to the main part of the inferior tract for a little way, but ceases before the thighs.

Amongst the various species of Psittaci I have examined, well-marked differences in some of these tracts occur, more particularly in the arrangement of the “dorso-lumbar fork,” and the greater or lesser development of a distinct “outer pectoral” branch to the inferior tract.

In *Lathamus discolor* (Pl. XVI. figs. 1, 2), the inferior tract of each side starts from about the angle of the jaw, and does not unite with its fellow. On the sternum it is about eight or nine feathers broad at

the widest part, the feathering being rather strong and not close. As in most Parrots, there are two humeral tracts. The space on the carina sterni between the inferior tracts of the two sides is not wide. There is a well-marked outer pectoral tract, about 1 inch long, distinguished by its rather stronger and closer feathering. It is quite separate from the main part of the inferior tract, the space between the two tracts being about as broad as the latter tract itself. The outer pectoral has the appearance of being somewhat dilated at its free end, owing to the presence of a few irregularly placed and small feathers lying to the outside of its termination. The main part of the inferior tract is rather narrow, with its rows of four and five feathers each separated by rather considerable spaces.

The scapular fork is rather long, the tracts being narrow and moderately strongly feathered.

The dorso-lumbar fork is elongated; each arm is of nearly the same strength and breadth throughout, beginning a little outside the scapular fork, with the part inside the arms of the latter represented only (as usual in the Psittaci) by one or two rows of small feathers, placed singly or in pairs. Each arm is composed of about fourteen rows of feathers (counting to the junction with its fellow), the rows being four feathers wide, rather close together, and of about the same width as the space between the tracts. There is some tendency in some of the anterior rows towards a dilatation of the tract, one or two of the rows being five feathers wide. In the more anterior parts of each arm, the most internal feather of each row is often placed in front of and at an angle with the other feathers composing it, and so comes to stand between two rows of three feathers each; so that at first each tract looks as if made up of rows of three (or four) feathers alternating with single feathers. This tendency to a 3.1.3 arrangement, however, disappears in the the more posterior parts of the tracts, the four feathers of each row there standing in a direct line with one another. The two arms unite to form the "handle" at about three quarters their entire length; after the junction the tract narrows rather rapidly towards the tail. The dorso-lumbar fork is throughout quite distinct from the lumbar feathering, which is very weak and diffuse.

In all the truly *Platycercine*¹ forms that I have examined—namely *Platycercus eximius* and *pennantii*, *Psephotus hæmatogaster* (four specimens) and *P. hæmatonotus*, *Pyrrhulopsis splendens* and *P. personata*, *Cyanorhamphus auriceps* and *C. novæ-zealandiæ*—the disposition of the outer pectoral tract and dorso-lumbar fork resembles essentially that of *Lathamus*. In all the outer pectoral is a distinct, more closely feathered, and rather narrowish tract, clearly separated throughout from the main part. In *Cyanorhamphus* this tract is distinctly hook-like, dilated at the end. In all the same length², and uniformity in strength and width, of the arms of the dorso-lumbar

¹ *I. e.* excluding *Aprosmictus*, *Polyteles*, *Euphema*, *Pezoporus*, &c.

² In *Pe. pennantii*, and in the two species of *Pyrrhulopsis* I counted fourteen, in *C. auriceps* thirteen, in *Ps. hæmatonotus* thirteen, and in *Ps. hæmatogaster* eleven rows of feathers in the arms of this tract to their junction.

tract is observable, the inclosed space being of about the same width as either of the tracts inclosing it, no tendency to a dilatation of the arms *at their junction* (though there is some in front) being present, and the rows of feathers in front having a more or less clear 3.1.3 arrangement. The lumbar feathering is always very weak; so that the boundaries of the dorso-lumbar fork are very clearly defined. *Lathamus*, however, differs from the above-mentioned forms a little by its longer and not so widely divaricated scapular fork, and by the greater breadth of its inferior tract on the sternum, thereby causing a corresponding diminution in the breadth of the carinal space. The general agreement, however, of the pterylosis in the two types will, I think, at once be evident from the figure of *Lathamus* (Pl. XVI. figs. 1, 2), and that of *Platycercus pennantii* (Pl. XVI. figs. 3, 4), which I have represented next to it for the sake of comparison.

If now we turn to the *Trichoglossinæ*¹ (See Pl. XVI. figs. 5, 6), in which so many naturalists have included *Lathamus*, we shall find important and well-marked differences in the two tracts mentioned above, though the general character of the pterylosis remains the same in all². The outer pectoral tract is never so narrow and distinct here as it is in *Lathamus* and its allies; it is usually almost triangular in shape, and so tolerably broad, shorter, and not so divergent, the interspace between it and the main tract being much narrower, and frequently with a few scattered feathers in it uniting the two tracts together. The inferior tract on the breast is always much broader, and the carinal space narrower.

Still better-marked characters between the two groups are to be seen in the disposition of the dorso-lumbar fork. This in all the *Trichoglossinæ* is extremely weak in front, the tracts not getting at all strongly feathered till some way (in *T. concinnus* $\frac{1}{2}$ inch) from the ends of the scapular fork. Each arm is much shorter (in all the forms I count about eight rows of feathers to the junction), wider and more diffusely feathered than in the *Platycercinæ*, and becomes dilated and more strongly feathered towards its junction with its fellow, which takes place further from the tail than in the other group. The united tract is strongly feathered and rather broad at first, but narrows rapidly again towards the tail. Figs. 5 and 6, Pl. XVI. represent the pterylosis of *Trichoglossus concinnus* (a bird a little larger than the "*Swift Parrakeet*"), and show the differences between the two groups, which, if somewhat slight, are nevertheless easily appreciable after a little study, and are as well marked as any others I have as yet observed in the pterylosis of this order.

Several points in the external characters of *Lathamus* show that

¹ Of these I have examined the pterylosis in *Eos rubra*, *Trichoglossi ornatus*, *hematodes*, *swainsoni*, *concinnus* (two specimens), and *pusillus*, and *Coriphilus fringillaceus*.

² I have as yet been unable to confirm Nitzsch's observation (Pterylogr. Eng. edit. p. 100) that in *Lorius garrulus* and *L. domicella* the inferior tracts are continuous over the lower surface of the neck.

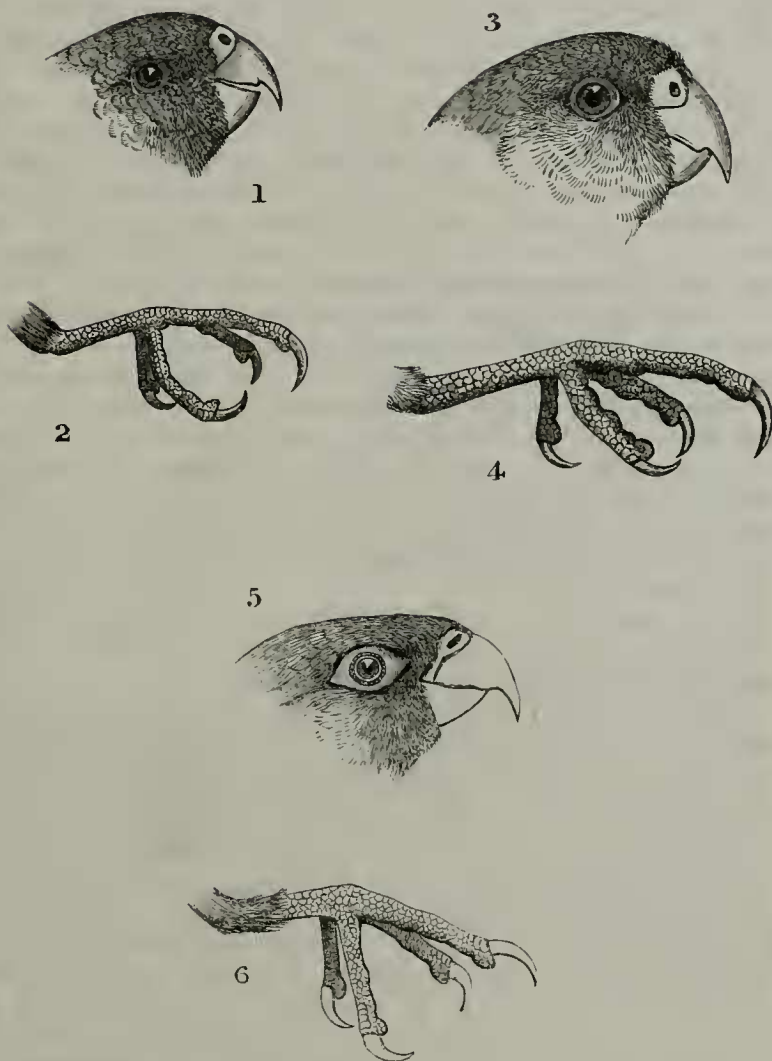


Fig. 1. Head of *Lathamus discolor*.
Fig. 2. Foot of ditto.
Fig. 3. Head of *Psephotus hæmatogaster*.
Fig. 4. Foot of dit'to.
Fig. 5. Head of *Trichoglossus concinnus*.
Fig. 6. Foot of ditto.

it has in fact no particular relationship to the *Trichoglossinæ*. The shape of the upper mandible, with a small but distinct tooth, is obviously (see fig. 1, p. 171) much nearer to that of *Psephotus* (fig. 3) than it is to that of a Lory (fig. 5). The same story is told still more plainly by its maxilla, which has none of the laterally compressed, elongate, and pointed form characteristic of the Lories, and which induced Sundevall to divide all Parrots into two groups "*Psittaci proprii*" and "*Psittaci orthognathi*," the latter including only the Lories and *Nestor*, and characterized by having the "maxilla inferior recta, angusta, altitudine longior." In *Lathamus* the maxilla is short and deep, with a broad and rounded anterior margin. These differences will be seen by a glance at figures 5 and 1, representing the heads of a *Trichoglossus (concinus)* and of *Lathamus*.

In all the *Trichoglossinæ* I have examined, the cere is rather narrow from before backwards, the anterior margin only sinuate, and the nostrils elongated and ovate, with their long axis directed forwards and *inwards*, and so somewhat *transversely* to the direction of the beak (fig. 5, p. 171). This is very evident in the living birds, and is also to be made out in skins. In *Lathamus*, however, and the *Platycercinæ* generally, the cere is much larger, with the anterior border on each side nearly semicircular; and the nostrils are oval and directed *upwards*, more nearly parallel with the culmen (see figs. 1 and 3).

In the small size of the nude orbital ring *Lathamus* agrees with the *Platycercinæ* rather than with the Lories, in which it is of fair size and rather conspicuous in the living birds.

In the shape of the wings, no doubt, *Lathamus* is somewhat aberrant, and nearer the Lories than the *Platycerci*. This is, however, so obviously an adaptive modification, due to the swift flight and arboreal habits of both these birds as compared with the more ground-loving mode of life of the *Platycerci*, that no stress can be laid on it as a taxonomic character. The *rounded* end of the wing-feathers, however, of *Lathamus* still point to its *Platycercine* affinities. Its feet, too, though not typically *Platycercine*, differ from those of the *Trichoglossinæ* (cf. figs. 2 and 6, p. 171) by their more elongated and slender tarsi and toes, with the latter not so much flattened and fitted for grasping branches, &c., as are those of the Lories, and with the claws not so strong and longer, particularly that on the third digit. In both these points more resemblance to the *Platycerci* is shown (cf. fig. 4, p. 171, foot of *Psephotus hæmatogaster*), though the different modes of life¹ have here again induced a certain amount of change from the form observed in the truly terrestrial *Platycerci*.

A thorough study of the osteology of the Parrots has yet to be

¹ Mr. Gould says ('Handb. B. Austr.' ii. p. 89):—"In its actions and manners it is closely allied to the *Trichoglossi*, but differs from them in some few particulars, which are more perceptible in captivity than in a state of nature. It has neither the musky smell nor the jumping motions of the *Trichoglossi*. I have never observed it alight on the ground, or elsewhere than among the branches."